

## ENVIRONMENT

# Do we know how bad toxic waste really is?

What comes to mind when you hear the words "toxic waste dump"?

I think of cancer and birth defects. And I think of Love Canal, N.Y., and Times Beach, Mo. — two communities evacuated for fear that toxic chemicals would poison their residents.

If you're unlucky, the words "toxic waste" make you think of your own neighborhood. You worry that a mess buried near your house may be making you or your family sick.

People in Norfolk's Glenwood Park near the naval base, have been so unlucky. Many worry that an old Navy toxic waste dump may be causing cancers in the neighborhood.

Results of a groundwater study done for the Navy on the dump's pollution, and a statistical analysis of neighborhood cancers by Virginia public health officials, indicate residents have little to fear.

But the conclusions were not accepted easily in the neighborhood. There is a gulf between what experts say and the public believes is great in matters involving environmental and human health. Many find the experts' assertions surprising if not shocking.

Toxic waste dumps, the symbols of environmental hazards, actually cause only 2 to 5 percent of all cancers, experts seem to agree. Whether we smoke, what we eat and our genetic predispositions play larger roles in determining our health.

Expert disease detectives rarely, if ever, find statistical evidence that waste sites are making large groups of people sick.

"If you ask me if hazardous waste sites cause cancers, I'd say the answer is yes and no," said Michael Greenberg, a Rutgers University professor who has been investigating reported cancer clusters for 25 years.

"There is rarely any evidence of any exposure of toxic materials to people. On the other hand, that's not what the courts think."

There are numerous examples of juries awarding large sums to people who say their illnesses are caused by toxic wastes, said Greenberg, a member of the National Academy of Sciences panel investigating waste sites. A company in Woburn, Mass., for example, recently paid \$8 million in an out-of-court settlement to people who linked leukemia in their neighborhood to plant wastes.

"That company was sufficiently disturbed by testimony in that case that it decided to pay rather than await the jury's verdict," Greenberg said.

The prospects of paying large sums to people who say they are injured by hazardous wastes, or of

spending tens of millions of dollars on cleaning up old dump sites, frightens companies and government agencies.

Facing bills that range from \$300 billion to \$700 billion for cleaning up the nation's most polluted dump sites, the federal Environmental Protection Agency and corporations responsible for pollution question whether the cleanups are worth the price. They are looking for cheaper alternatives.

EPA has begun reassessing whether its current regulations overstate the dangers posed by one of its most tightly-regulated compounds, dioxin. Dioxin is a cancer-causing agent formed during production of herbicides and organic solvents and in paper bleaching.

The EPA announced in August that it will begin a yearlong study that could lead to a lower risk assessment for the compound. The agency said its reassessment was compelled by new information, the most compelling of which came from Vernon H. Houk, a scientist at the Centers for Disease Control in Atlanta. Houk wrote in a recent report: "There is no convincing evidence for an association of dioxin exposure in humans" with death, reproductive problems, neurological disorders or liver disease.

"If dioxin is a human carcinogen," he wrote, "it is a weak one."

It was Houk who nine years ago recommended the evacuation of 2,000 people from Times Beach to protect them from — you guessed it — dioxin contamination.

Four years before that, residents of Love Canal, near Buffalo, were evacuated because of — yes — dioxin. In the last two years, people have begun moving into houses built in the Love Canal area.

So what's going on? Is everything we've been conditioned to believe about toxic wastes' impact on human and environmental health vastly overblown?

Some say yes. Some scientists say that compared with public health hazards such as smoking and drunken driving, the risk posed by exposure to chemicals like dioxin is negligible.

Others say that EPA moves to downgrade the dangers of dioxin and hazardous wastes are prompted more by industry concerns about liability than by science.

"It's really jumping the gun to say this has been a whole hullabaloo about nothing," said Jacqueline Warren, senior attorney for the Natural Resources Defense Council, a New York non-profit group.

Her assertion is bolstered by the U.S. General Accounting Office, which last month released a report saying EPA's effort to assess the health risks of hazardous waste sites is "seriously deficient."

"As a result," the GAO report says, "people potentially affected by the sites have not been given adequate information about the sites' possible health consequences."



Cyril T. Zaniewski